



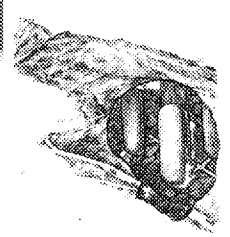
Red Hill Fuel Facility

Update on the Status of Work Administrative Order on Consent

Presented by:

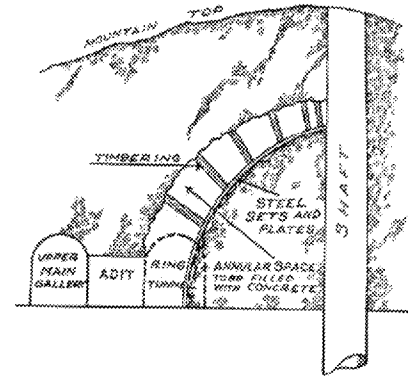
Hawaii Department of Health

US Environmental Protection Agency



Summary of the Problem

- Massive facility built in the early 1940s
- Unique design and construction
- Located within volcanic rock and above a drinking water aquifer
- Product Storage
 - Currently stores only Jet Fuel and Marine Diesel
 - Historically stored gasoline, aviation fuel
 - Different products have different fuel risks
- Had leaks
- Complex Geology
 - Extremely difficult to locate contamination
 - Even more difficult to cleanup





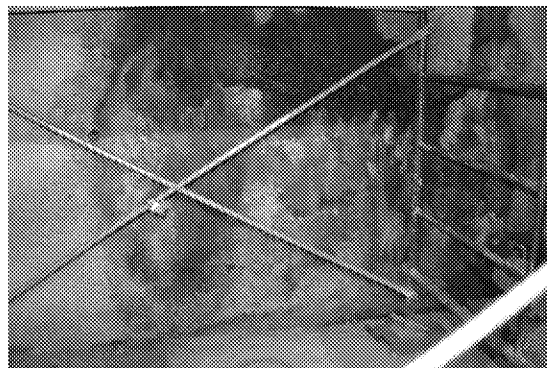
Ongoing Water Monitoring

- Drinking Water is Safe
 - Potential petroleum related contaminants not detected in BWS Halawa Shaft and Moanalua Wells
 - Very low levels of petroleum related contaminants detected in Red Hill Shaft
 - Petroleum contaminants not detected in most recent sampling event
 - Trace petroleum contaminants have been found, but not above state or Federal risk-based standards
- Groundwater monitoring beneath and around facility shows some contamination
 - Highest concentrations limited to area directly below tanks



Why did Tank 5 leak approximately 27,000 gallons of jet fuel in January 2014?

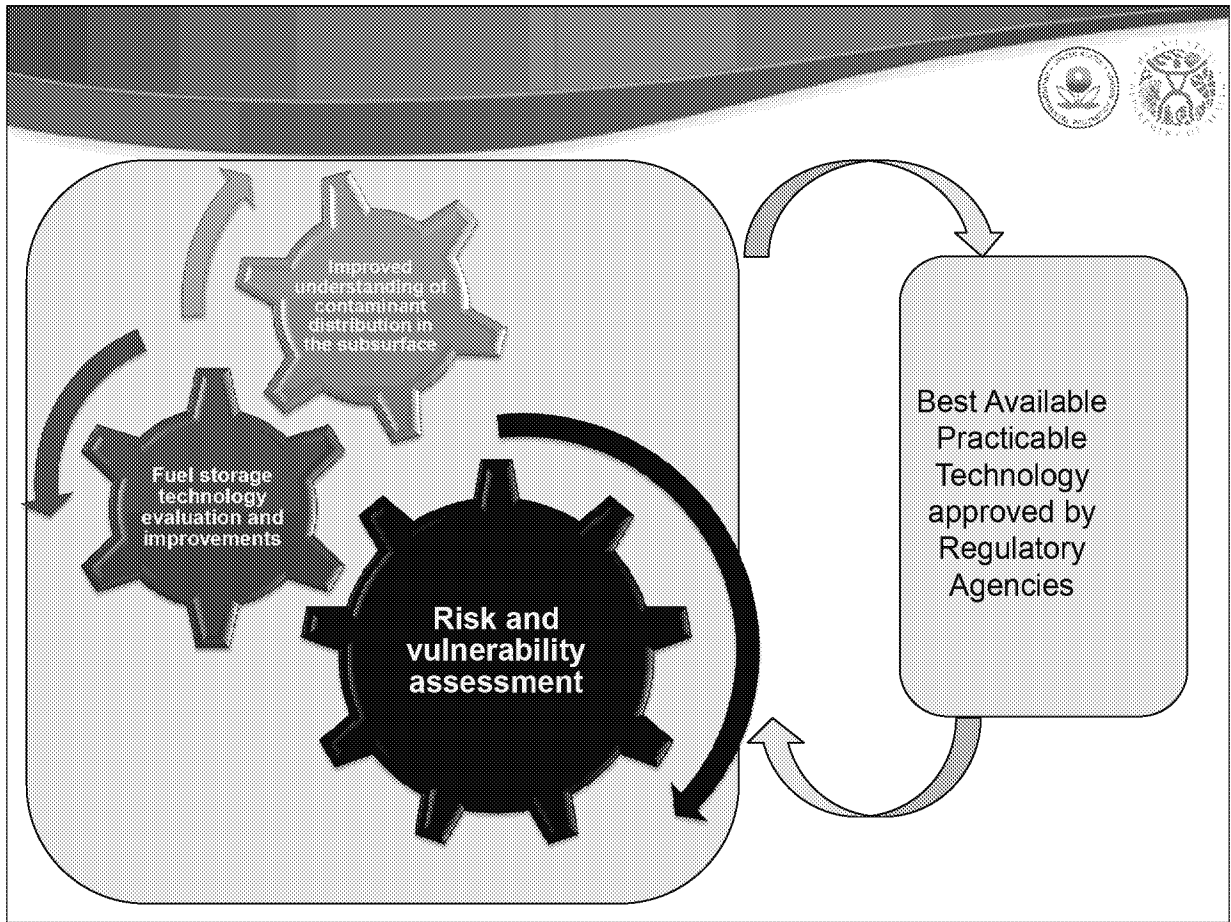
- Defects were found in the steel liner of one of the tanks
- Agencies believe release resulted from issue with quality control
 - Contractor
 - Government
- Amplified by Management Systems
 - Alarm response
 - Filling process





Objectives of the AOC

- Protect drinking water
- Ensure actions are taken by Navy and DLA to reduce risk of future releases
- How
 - Understand likelihood and consequences of potential releases
 - Implement best technologies and practices to reduce risk to the maximum extent practicable





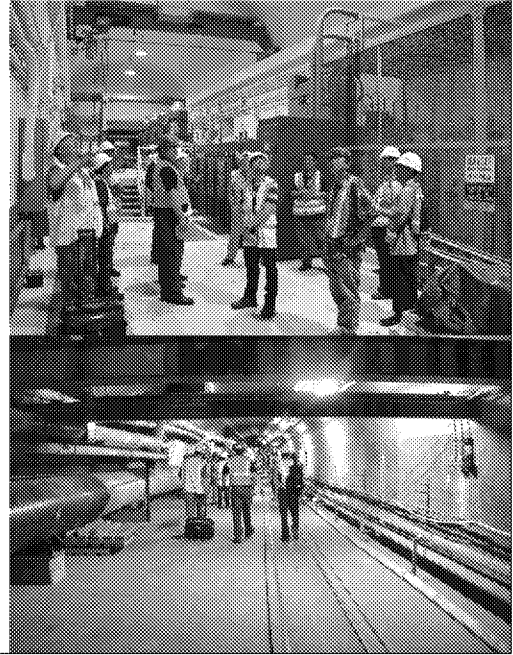
Current AOC Statement of Work Status

- Section 2- Navy/DLA to submit Report on 10/11/16
- Section 3- Regulators reviewing scope of work
- Section 4- Scoping meetings underway to identify improvements
- Section 5- Scoping meetings underway to identify improvements
- Section 6 and 7- Navy/ DLA revising scopes of work
- Section 8- Scoping meetings underway



Expert Evaluation of the Facility

- Regulatory Agencies brought fuel storage experts to conduct a thorough evaluation of the facility in May 2016
 - ERG Consulting, Aspen Controls, PEMY Consulting, and Powers Engineering
- Preliminary Findings
- Report should be available by early 2017





Stakeholder Involvement and Transparency

- BWS, USGS, and DLNR identified as subject matter experts
 - Actively involved in the AOC implementation process
- Transparency – All important AOC documents and monitoring data available to the public online
 - <https://www.epa.gov/red-hill>
 - <http://health.hawaii.gov/shwb/ust-red-hill-project-main/>



Expertise Involved in Project

Navy/DLA

- Navy Experts
- Navy EXWC
- AECOM
- HDR Consulting
- ABS Consulting

Regulatory Agencies

- DOH Experts
- EPA Experts
- University of Hawaii
- PEMY Consulting
- Innovex Consulting

External Subject Matter Experts

- DLNR
- U.S. Geological Survey
- Board of Water Supply
 - Intera Consulting
 - Exponent Consulting
 - Mott-Smith Consulting



What to Expect Next

- Data from four new monitoring wells
- Destructive testing
- First tank upgrade decision mid-2018
 - Potential pilot technology tests



For More Information

- <https://www.epa.gov/red-hill>
- <http://health.hawaii.gov/shwb/ust-red-hill-project-main/>
- Email: RedHill@EPA.GOV
- Call: Thu Perry of HDOH - 808-586-4226